



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,801	03/29/2004	Boris Ginzburg	P-6390-US	9735

4944 7590 12/12/2007
PEARL COHEN ZEDEK LATZER, LLP
1500 BROADWAY, 12TH FLOOR
NEW YORK, NY 10036

EXAMINER

SAMS, MATTHEW C

ART UNIT	PAPER NUMBER
----------	--------------

2617

MAIL DATE	DELIVERY MODE
-----------	---------------

12/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/810,801</p>	<p>Applicant(s)</p> <p align="center">GINZBURG ET AL.</p>	
	<p>Examiner</p> <p align="center">Matthew C. Sams</p>	<p>Art Unit</p> <p align="center">2617</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/24/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,16,18,19,21,22,28-33,39,41 and 42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,16,18,19,21,22,28-33,39,41 and 42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
|--|---|

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on 9/24/2007.
2. Claims 2, 17 and 40 have been canceled.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 3-8, 16, 18, 19, 21, 22, 28-33, and 39-42 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 16, 28 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuan et al. (US-2003/0224797).

Regarding claim 1, Kuan teaches a method of hidden node detection at an access point of a wireless communication system including at least the access point (Fig. 2 [Access Point]) and a plurality of nodes (Fig. 2 [Station]), comprising:

receiving a nodes report from each of a plurality of reporting nodes of the wireless communication system (Page 2 [0028] *i.e.* "compile a database based on the received transmissions") wherein a nodes report includes node communication related

parameters of other nodes of the wireless communication system which are measured by a reporting node; (Page 2 [0030 & 0047] *i.e.* "node element" and "session element" and Page 4 [Tables 2 & 3]) and

detecting a hidden node by analyzing the measured node communication related parameters of nodes of the wireless communication system based on the nodes reports from the plurality of reporting nodes. (Page 6 [0085] *i.e.* "the detector can scan the channels of the wireless local area network to receive transmissions sent from and received by the station with known or unknown APs", [0090], Table 7 and Page 7 [Claim 1])

Kuan differs from the claimed invention by not explicitly reciting broadcasting a first command to the plurality of nodes to start a hidden node detection and broadcasting a second command to the plurality of nodes to send a nodes report to the access point. However, Kuan teaches the fact that the reporting node can be a "station in the wireless local area network" (Page 6 [0089]) and can be "used by a user as a diagnostic tool, by an administrator as an administrative tool" (Page 6 [0089]) which one of ordinary skill in the art would realize as being the ability for an administrator to remotely control the reporting node (*i.e.* starting hidden node detection & transmitting the results) to begin collecting information to diagnose the source of a problem on the network.

Regarding claim 16, the limitations of claim 16 are rejected as being the same reason set forth above in claim 1.

Regarding claim 28, the limitations of claim 28 are rejected as being the same reason set forth above in claim 1.

Regarding claim 39, the limitations of claim 39 are rejected as being the same reasons set forth above in claim 1.

6. Claims 3-8, 18, 19, 21, 22, 29-33, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuan in view of Choi (US-6,967,944).

Regarding claim 3, Kuan teaches the limitations of claim 1 above and detecting an unreported node (Page 3 [0050-0051]), but differs from the claimed invention by not explicitly reciting sending a command to activate a hidden node protection mechanism on a reporting node.

In an analogous art, Choi teaches a system and method for increasing link capacity in concurrent wireless local area networks that includes activating a hidden node protection on a reporting node. (Col. 4 lines 43-56 and Col. 5 lines 9-31) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of Kuan after modifying it to incorporate the activation of hidden node protection on a reporting node of Choi. One of ordinary skill in the art would have been motivated to do this since it enables hidden node protection to be directed only to the affected nodes.

Regarding claim 4, Kuan in view of Choi teaches detecting a signal strength below or equal to a threshold; (Choi Col. 5 line 4 through Col. 6 line 3) and

sending a command to activate a hidden node protection mechanism on a reporting node. (Kuan Page 6 [0089], Choi Col. 4 lines 43-56 and Col. 5 lines 17-28)

Regarding claim 5, Kuan in view of Choi teaches wherein sending a command to activate a hidden node protection mechanism (Kuan Page 6 [0089], Choi Col. 4 lines 43-56 and Col. 5 lines 17-28) comprises:

 sending a command to enable a request-to-send\clear-to-send (RTS\CTS) control mechanism. (Choi Col. 4 lines 43-56)

Regarding claim 6, Kuan in view of Choi teaches wherein sending a command to activate a hidden node protection mechanism (Kuan Page 6 [0089], Choi Col. 4 lines 43-56 and Col. 5 lines 17-28) comprises:

 sending a subset of power adjustment commands to a subset of nodes based on the nodes report. (Choi Col. 6 line 57 through Col. 7 line 3)

Regarding claim 7, Kuan in view of Choi teaches wherein sending a command to activate a hidden node protection mechanism (Kuan Page 6 [0089], Choi Col. 4 lines 43-56 and Col. 5 lines 17-28) comprises:

 sending a command to enable a request-to-send\clear-to-send (RTS\CTS) control mechanism. (Choi Col. 4 lines 43-56)

Regarding claim 8, Kuan in view of Choi teaches wherein sending a command to activate a hidden node protection mechanism (Kuan Page 6 [0089], Choi Col. 4 lines 43-56 and Col. 5 lines 17-28) comprises:

 sending a subset of power adjustment commands to a subset of nodes based on the nodes report. (Choi Col. 5 lines 4-28 and Col. 6 lines 57 through Col. 7 line 3)

Regarding claim 18, Kuan in view of Choi teaches a controller to activate a hidden node protection mechanism on a reporting node if a hidden node is detected. (Choi Col. 4 lines 43-56 and Col. 5 line 9-28)

Regarding claim 19, Kuan in view of Choi teaches wherein the one or more node communication related parameters includes a signal strength indicator and the hidden node detector is able to detect a hidden node by analyzing the signal strength indicator. (Choi Col. 5 line 4 through Col. 6 line 23)

Regarding claim 21, the limitations of claim 21 are rejected as being the same reason set forth above in claim 5.

Regarding claim 22, the limitations of claim 22 are rejected as being the same reason set forth above in claim 6.

Regarding claim 29, Kuan in view of Choi teaches the access point is able to activate a hidden node protection mechanism at the node to protect the node from transmissions of the hidden node. (Choi Col. 4 lines 43-56 and Col. 5 line 9-28)

Regarding claim 30, Kuan in view of Choi teaches the communication related parameters comprises a signal strength indicator of the plurality of nodes and the access point is able to detect a hidden node by analyzing said signal strength indicator. (Choi Col. 5 line 4 through Col. 6 line 23)

Regarding claim 31, Kuan in view of Choi teaches wherein the access point is able to detect a hidden node by detection of an unreported node at the nodes report. (Kuan Page 6 [0085], [0090], Table 7, Page 7 [Claim 1] and Choi Col. 5 lines 4-60)

Regarding claim 32, the limitations of claim 32 are rejected as being the same reason set forth above in claim 5 & 7.

Regarding claim 33, the limitations of claim 33 are rejected as being the same reason set forth above in claim 8.

Regarding claim 41, the limitations of claim 41 are rejected as being the same reason set forth above in claim 3.

Regarding claim 42, the limitations of claim 42 are rejected as being the same reason set forth above in claim 4.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Application/Control Number:
10/810,801
Art Unit: 2617

Page 8

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Sams whose telephone number is (571)272-8099. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MCS
12/3/2007


LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER